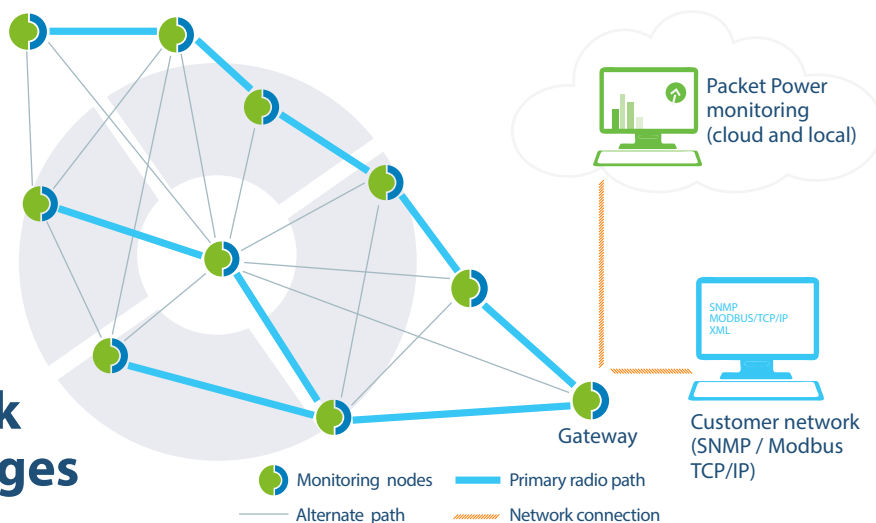# PACKETPOWER

OEM Solutions: Embeddable micro-sized power and environmental monitors with integrated wireless networking

- Packet Power monitoring (cloud and local)
- SNMP MODBUS/TCP/IP XML
- Customer network (SNMP / Modbus TCP/IP)
- Gateway

● Monitoring nodes — Primary radio path
— Alternate path ░ Network connection

Packet Power Network Architecture Advantages

The convenience of wireless with the reliability of a wired network. Packet Power's self configuring mesh network delivers all the advantages of wireless connectivity while eliminating the traditional difficulties associated with wireless propagation and system configuration. Using a "mesh topology," the system routes data from one monitor to another, finding the optimal path for every transmission. Unique to Packet Power and designed for data centers, the resulting wireless network is the most robust wireless monitoring platform available. Once installed, the network is fully self-managing and automatically adjusts as monitors are added or removed.

Why customers choose Packet Power wireless solutions

RELIABILITY

Packet Power devices have been used in the most challenging critical environments with over 20,000 devices in operation. Customer's recognize Packet Power as "the wireless solution that really works".

SCALABILITY

The ideal architecture for high device count environments, the system can accommodate a virtually unlimited number of wireless nodes. Adding a node is easy, with the wireless network automatically recognizing and configuring new devices.

SECURE AND IMPENETRABLE

Packet Power devices use a proprietary node to node wireless communications protocol that is invisible to WiFi, Zigbee and other standard networks. In addition, the option to encrypt wireless traffic and fully segregate the monitoring network provides comprehensive security.

DATA AGGREGATION

ll data from monitors is aggregated at the Gateway and immediately visible with no configuration needed. Open protocols (SNMP, Modbus TCP/IP, XML) allow the data to be acquired by just about any system. The available cloud or local monitoring application is ideal for managing the data for those looking for a plug and play monitoring solution.

REDUCED INFRASTRUCTURE COSTS

Choosing Packet Power means much lower installation and deployment costs, no device commissioning issues, and the freedom to deploy devices exactly where they are needed. Hardware costs are often far lower than hardwired networks and traditional wireless systems.

OEM Solution Components

THREE PHASE POWER MONITOR
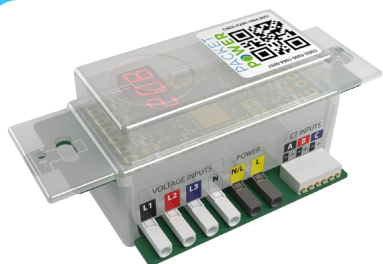
- Accommodates external split core and solid core CTs for any current
- Monitored Parameters: Voltage (V), Current (A), Power (W), Reactive Power (VAR / VA), Power Factor, Energy Usage (Wh), Phase Shift, Frequency (Hz), THDI, THDV, Net Metering
- Multiple meter configurations including 3 x 1 phase, L-L, L-N and true three phase

- 100-480V (50/60 Hz)
- High accuracy available (+/-0.5%)
- No external antenna required
- Core dimensions: 2.8" x 1.6" x 1.4"
- Overall Dimensions: 4.2" x 1.6" x 1.8
- Global certifications (UL, CE and more) and global radio operating frequencies (900 MHz and 2.4 GHz)
- Integrated LED display

ETHERNET GATEWAY

- Receives information from up to 150 wireless monitoring nodes and transfers information on the network
- Scale to thousands of nodes per facility just by adding Gateways
- Supports wireless firmware updates to all network devices
- 128 bit Encryption

- 900 MHz and 2.4 GHz capable (global frequency capabilities)
- Transmission Range: 10-30m typical
- Available with integrated display
- SNMP, XML and ModBus TCP/IP output
- Indicator status lights
- PoE or line powered

ADDITIONAL SOLUTIONS

Smart Power Cable
Monitors embed precise power and temperature monitoring into a power cord format.

Environmental monitoring
- Up to 12 temperature sensors
- Additional sensor types available

EMX portal
Available either as a quickly deployed cloud-based service or as software you install within your own network.

PACKET POWER IN THE DATA CENTER

- Bus End Feed
- Aisle Temperature
- Containment Temperature
- CRAC Temperature
- Relative Humidity
- Differential Pressure
- Bus Tap-Off Box (interior)
- Cabinet Temperature
- Distribution Circuit Breakers
- Rack PDU
- Under Floor PDU Cables
- Bus Tap-Off Box (power cable)
- Customer BMS / DCIM (Modbus TCP/IP SNMP XML)
- Ethernet Gateway
- EMX Cloud or Local Monitoring Service